WHAT IS CLAIMED IS:

1. A method for forming metal lines, comprising the following steps of:

preparing a semiconductor substrate having a lower metal line;

successively forming a polymer dielectric film and an oxide film on the substrate, the polymer dielectric film and the oxide film having a contact for exposing a predetermined portion of the lower metal line;

dry cleaning a resultant structure according to a remote plasma mechanism to remove the metal oxide film from the surface portion of the lower metal line exposed via the contact and to form a protective film on a lateral portion of the polymer dielectric film; and

embedding a metal film functioning as an upper metal line in a contact structure.

2. The method for forming metal lines as set forth in claim 1, wherein the dry cleaning step is performed with a cleaning gas using any one of an argon gas and a gas containing fluoro and nitro groups.

3. The method for forming metal lines as set forth in claim

2, wherein the cleaning gas comprises at least one selected from $NF_3/H_2/N_2$, $NF_3/He/O_2$, NF_3/He and a combination thereof.

4. The method for forming metal lines as set forth in claim 1, wherein the dry cleaning step is performed in a temperature range from about 18 to 500℃.

5. The method for forming metal lines as set forth in claim 1, wherein the dry cleaning step generates plasma with microwave or radio frequency.